

Cardinal Signs

for

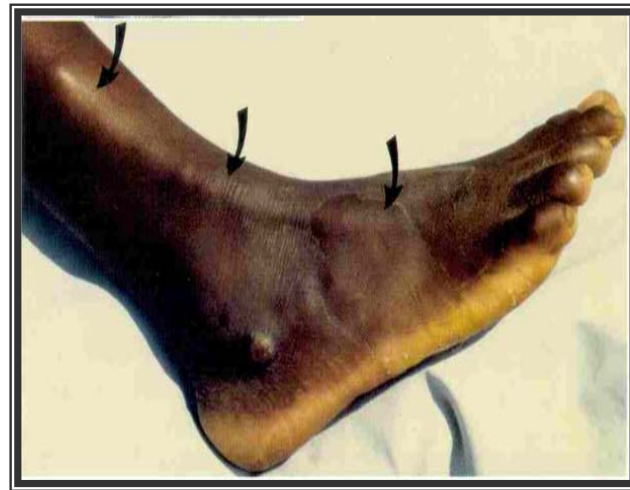
Confirmation

of

Leprosy



Suspecting Leprosy:



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- Pale or reddish patch on the skin
- Shiny thick skin of face
- Swelling / nodules in the face and earlobes
- Reduced / loss of sensation in the skin patch
- Numbness or tingling of hands or feet
- Painful and tender/ palpable nerves (esp near elbow, wrist, knee, ankle)
- Weakness of hands, eyelids and feet
- Painless wounds or burns on the hands and feet
- Visible deformities of hands feet & eyes (claw hands and feet)



Suspecting Leprosy:

- **Chronic blockage of nose due to Infiltration and crust formation**
- **Things tend to fall/ slip out of the hand**
- **Things feel different while holding in the hand**
- **Hands or feet feel weak, slimmer with shiny skin , loss of hair**
- **Loss of sweating in an area**
- **Inability to retain chappal (foot wear without back strap)**

- **Big toe coming in way while walking**
- **Recent Impairment of vision**
- **Red painful eye**
- **Recent / worsening of existing Lagophthalmos (Inability to close eye/s)**
- **Trichiasis**
- **Epiphora**
- **Epistaxis**
- **Hoarseness of voice**

Other Manifestations of the disease:

- Anosmia
- Chronic blockage of nose
- crust formation
- Blood stained discharge
- ulcers may appear on nasal
- perforation of nasal septum
- saddle nose deformity
- Hoarse cough & husky voice
- Dry, lusterless, shrunken narrowed and longitudinally ridged nails

- Leonine facies
- Bone cyst
- Medullary cavities
- Periosteum, Charcot jts
- Orchitis, Gynaecomastia
- loosening of upper central incisors
- Reticulo-endothelial Sys
- Glomerulonephritis
- Pyelonephritis .
- Renal amyloidosis

PAL report late:

- Skin lesions **do not hurt** due to loss of sensation
- Lack of awareness disease and **curability**
- May not know **Place** of treatment
- May not know that treatment is available **free of cost**
- Not able to afford **traveling cost**
- Hides the disease for the **fear of stigma.**



Cardinal Signs

Most of the Leprosy cases can be Diagnosed clinically on the basis of cardinal signs

Presence of any one of the cardinal signs is sufficient to confirm the diagnosis of leprosy

Absence of any cardinal sign , after few months of treatment, does not rule out Leprosy.

Cardinal Signs

Hypo-pigmented or reddish skin lesion(s)
with **Definite Sensory Deficit**



Involvement of the peripheral nerves
Demonstrated by definite **thickening** of the
nerve with/ without loss of sensation
and/or weakness of the muscles of the
hands, feet or eyes supplied.

Demonstration of **M leprae** in the lesions
- Difficult to diagnose cases

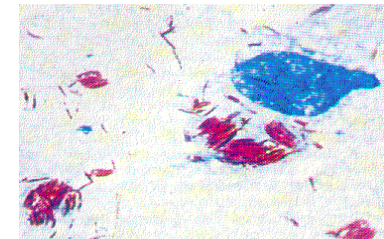
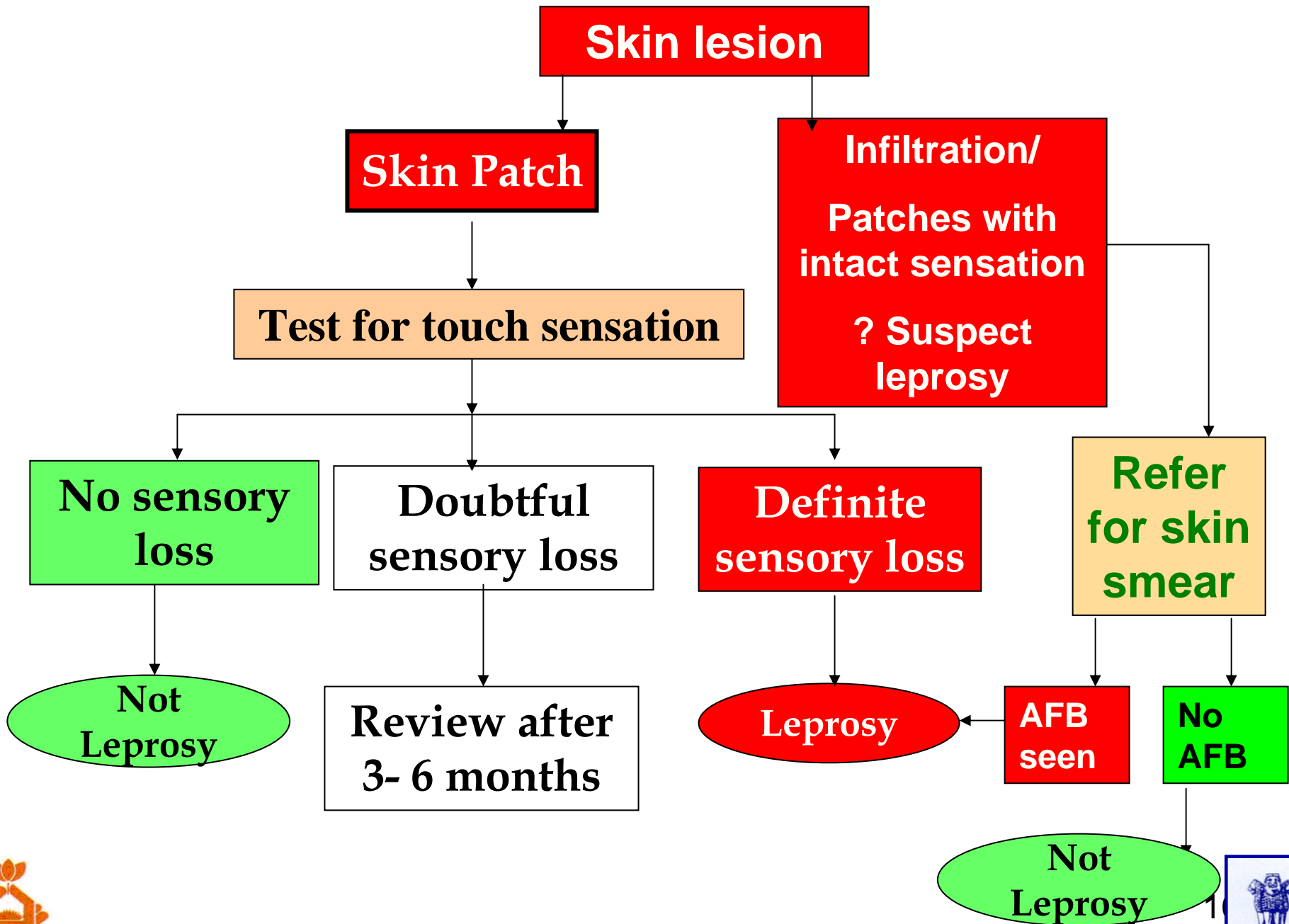
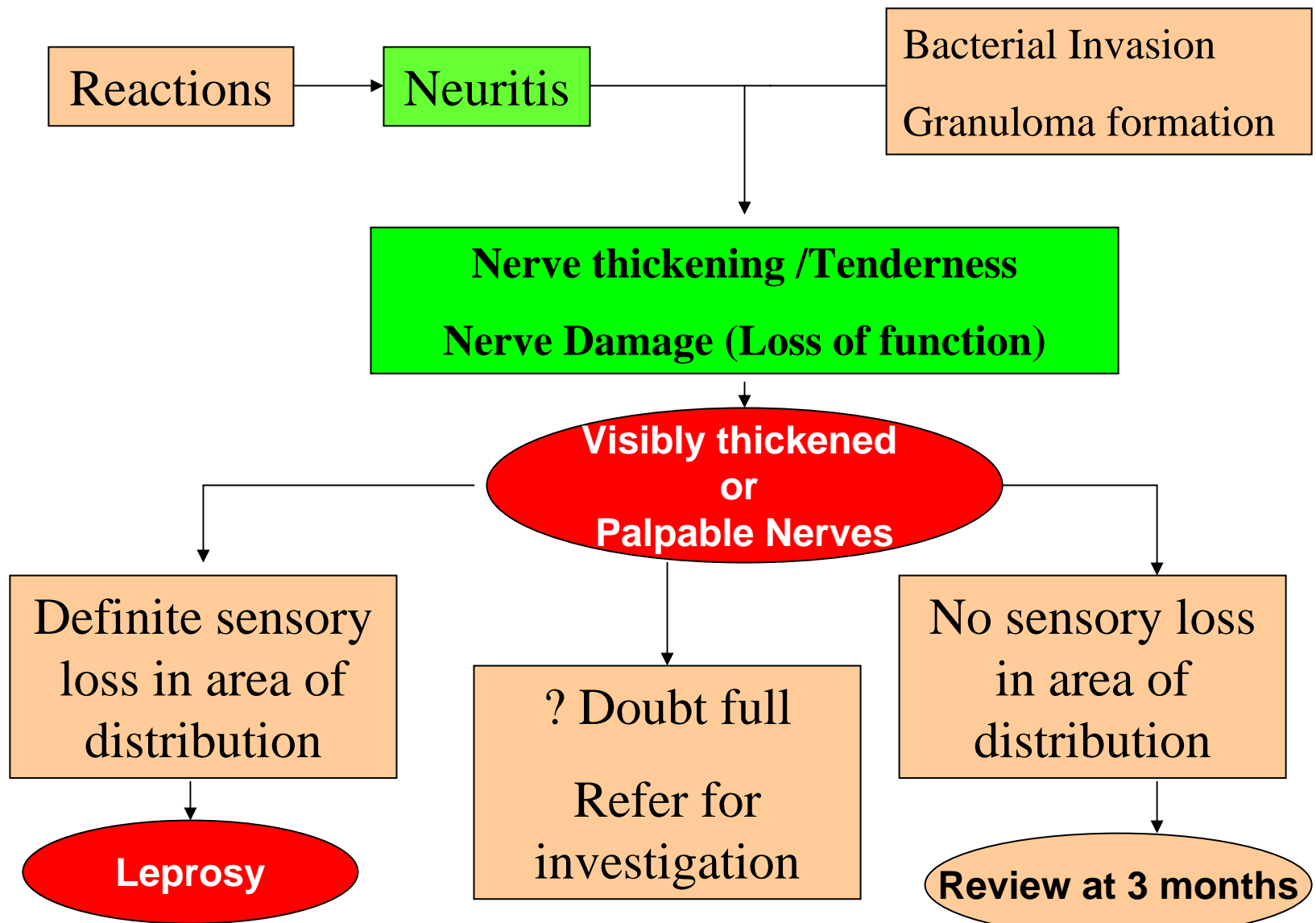


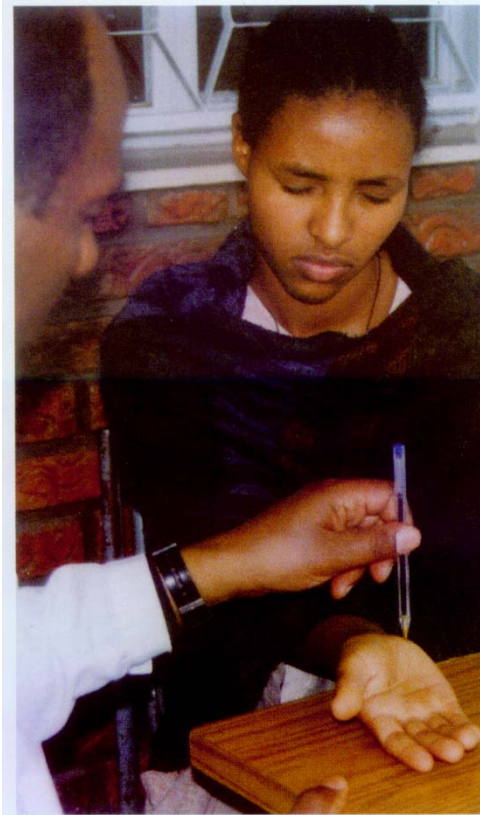
fig. 5 *M. leprae*, singly and in globi



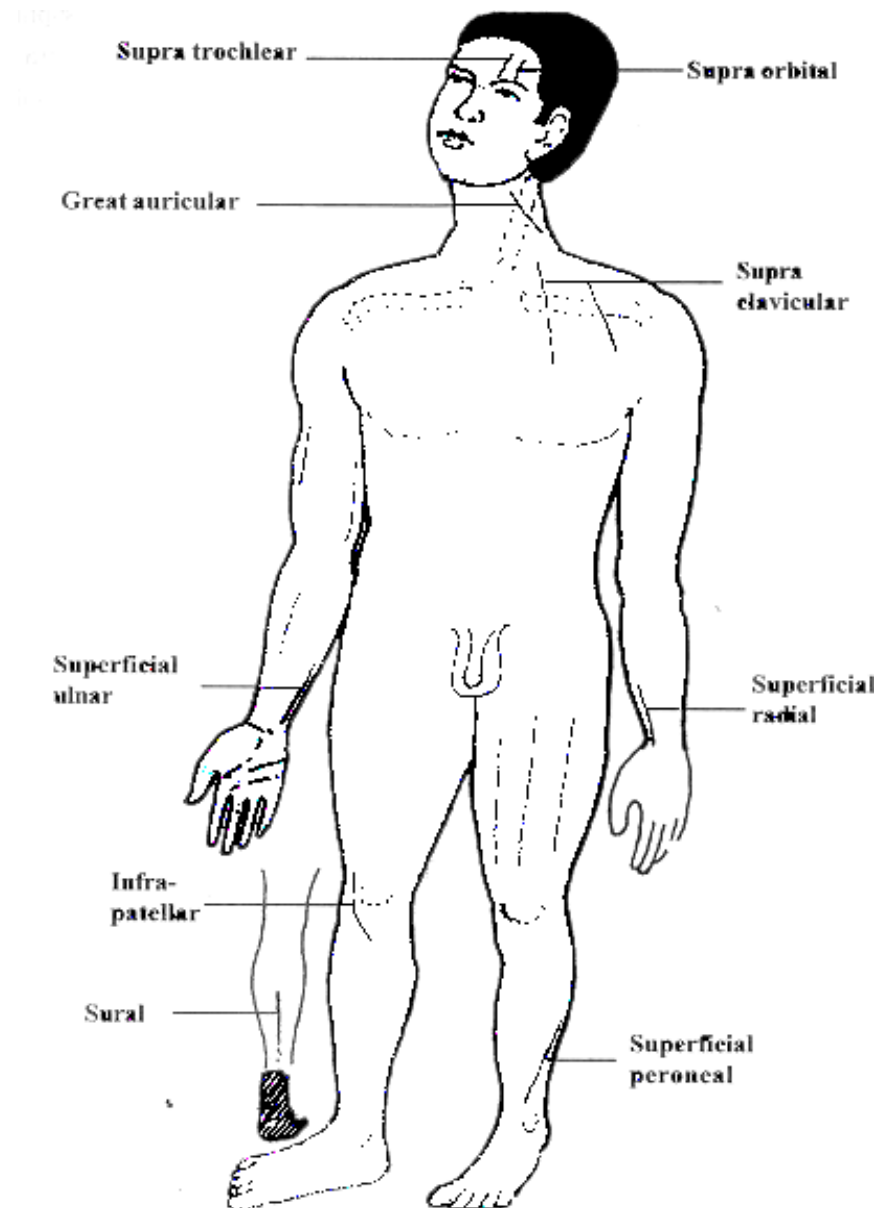


Testing For Sensory Deficit

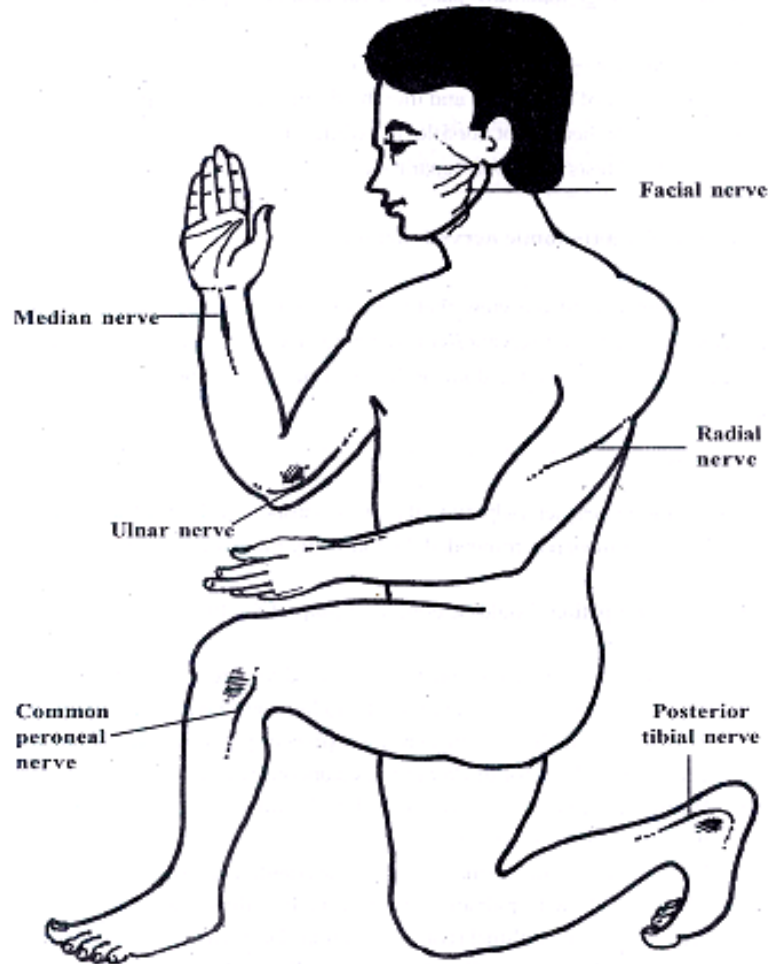
Skin Patch Lesions Hands / Feet



Sensory Cutaneous Nerves- visible



Commonly affected nerve with motor function



Facial

Ulnar

Median

Radial

Lateral popliteal

Posterior tibial



Demonstration of Acid fast bacilli in skin smear

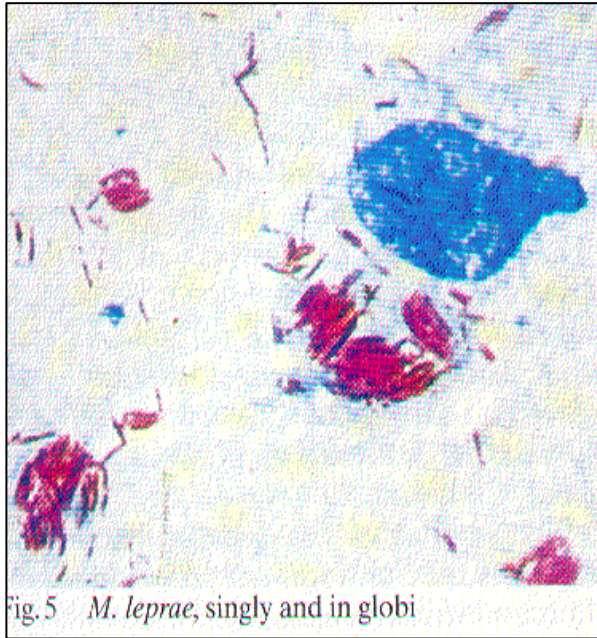


Fig. 5 *M. leprae*, singly and in globi

- Available at DH / specialized inst.
- Infiltrative lesions of skin without loss of sensation – especially face
- Nerve involvement without thickening of nerve / skin lesions
- First presentation nodules with fever (ENL reaction)
- Skin lesions with doubtful diagnosis
- Relapse



Demonstration of Acid fast bacilli in skin smear

- **Positive Skin Smear in – Confirms Leprosy untreated person**

Negative Skin Smear – Leprosy can not be excluded

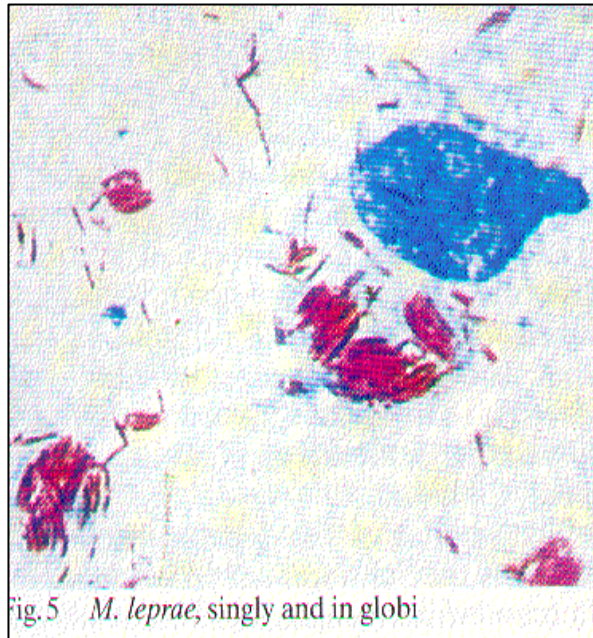


Fig. 5 *M. leprae*, singly and in globi



Other investigations

- **Tissue Biopsy - Nerve Biopsy** – **Pure Neuritis**
- **Fine Needle Aspiration Cytology** – **suspected lepra reaction**
- **Polymerase Chain reactions (PCR)** – **confirms presence of viable bacteria**

Diagnosis of Relapse

General Condition	: Satisfactory
Progress of Ds	: Slow
Lesion	: New lesions appear
Characteristics	: Not painful / tender/ swollen
Damage	: Slow to occur
Time	: Usually after three years after completion of treatment



Referral for diagnosis

Suspecting Leprosy/ Relapse

Cannot confirm clinically

If in doubt – exclude other conditions

Ethical responsibility in diagnosing leprosy:

If you suspect leprosy but cannot confirm the diagnosis

- **Inform patient about common signs and symptoms of the disease.**
- **Try to extract history of contact**
- **Try to extract history or presence of other associated features**
- **Refer the person to specialist for diagnosis & skin smear examination**
- **If possible ask person to report back after 3-6 months for reassessment**

